



IN THE UNITED STATES  
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Ronald A. Fial  
William Middleton Sheppard

Attorney Docket No. 2000-0276

Application No. 09/765166 - Confirmation No. 7479

Filed January 18, 2001

Examiner Not Yet Assigned Group Art Unit 2838

Title AC Power Protection Unit

COMMISSIONER FOR PATENTS  
WASHINGTON, D. C. 20231

SIR:

PRELIMINARY AMENDMENT

Please enter the following preliminary amendment to the above-identified application:

**In the Specification**

Add the following paragraphs before page 2, line 1:

-- Title

**AC POWER PROTECTION UNIT**

-- Technical Field

The present invention relates to alternating current ("AC") power supplies, in general. More particularly, the present invention relates to the supply of AC power from a cable television ("CATV") system into the home, and detecting a resistive load connected to the AC power source.

**--Background of the Invention**

Known power delivery systems use ground fault interrupters ("GFIs") that turn off electrical power when they sense an unbalance in the current flow between the hot and neutral wires that deliver AC electrical power. GFIs may be able to sense if a person or animal is touching the hot and neutral wires, thereby completing the circuit. GFIs, however, are not applicable in situations where the hot and neutral wires do not carry equal currents, such as CATV cables, because another return, namely ground, exists between the neutral-connection-to-the-load and the source of the AC power.

Power to loads can be turned on and off by switching circuit systems such as field effect transistors ("FETs"), silicon controlled rectifiers ("SCRs"), triacs, bipolar transistors, or relays. When FETs are used for switching circuits, complex level-shifting circuits or optical isolators are needed to properly drive the gate terminals of the FETs. FETs, however, are desirable for switching applications because switching AC power on and off using semiconductor junction-based devices, such as SCRs, triacs, bipolar transistors, generates electromagnetic interference and cross-over distortion, is less efficient and requires more drive power than FETs. Relays are slower than FETs and require increased drive power.--

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the specification:**

The following paragraphs have been added before the word "Known" at page 2, line 1:

**AC POWER PROTECTION UNIT**

**Technical Field**

The present invention relates to alternating current ("AC") power supplies, in general. More particularly, the present invention relates to the supply of AC power from a cable television ("CATV") system into the home, and detecting a resistive load connected to the AC power source.

**Background of the Invention**

Known power delivery systems use ground fault interrupters ("GFIs") that turn off electrical power when they sense an unbalance in the current flow between the hot and neutral wires that deliver AC electrical power. GFIs may be able to sense if a person or animal is touching the hot and neutral wires, thereby completing the circuit. GFIs, however, are not applicable in situations where the hot and neutral wires do not carry equal currents, such as CATV cables, because another return, namely ground, exists between the neutral-connection-to-the-load and the source of the AC power.

Power to loads can be turned on and off by switching circuit systems such as field effect transistors ("FETs"), silicon controlled rectifiers ("SCRs"), triacs, bipolar transistors, or relays. When FETs are used for switching circuits, complex level-shifting circuits or optical isolators are needed to properly drive the gate terminals of the FETs. FETs, however, are desirable for switching applications because switching AC power on and off using semiconductor junction-based devices, such as SCRs, triacs, bipolar transistors, generates electromagnetic interference and cross-over distortion, is less efficient and requires more drive power than FETs. Relays are slower than FETs and require increased drive power.

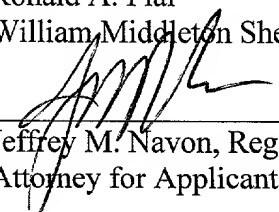
**REMARKS**

The specification of the above-identified application has been amended. No new matter has been added.

No fee is believed to be required. However, the Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C. F. R. 1.16 and 1.17 to AT&T Corp. Deposit Account No. 01-2745.

Respectfully submitted,

Ronald A. Fial  
William Middleton Sheppard



Jeffrey M. Navon, Reg. No. 32,711  
Attorney for Applicants

Date: 6/7/01  
AT&T Corp.  
P. O. Box 4110  
Middletown, NJ 07748